

Grizzly *Industrial, Inc.*®

MODEL T10165 HIGH-PRECISION MINI ROTARY TOOL OWNER'S MANUAL



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#TS11870 PRINTED IN JAPAN

 **WARNING!**

This manual provides critical safety instructions on the proper setup, operation, maintenance and service of this machine/equipment.

Failure to read, understand and follow the instructions given in this manual may result in serious personal injury, including amputation, electrocution or death.

The owner of this machine/equipment is solely responsible for its safe use. This responsibility includes but is not limited to proper installation in a safe environment, personnel training and usage authorization, proper inspection and maintenance, manual availability and comprehension, application of safety devices, blade/cutter integrity, and the usage of personal protective equipment.

The manufacturer will not be held liable for injury or property damage from negligence, improper training, machine modifications or misuse.

 **WARNING!**

Some dust created by power sanding, sawing, grinding, drilling, and other construction activities contains chemicals known to the State of California to cause cancer, birth defects or other reproductive harm. Some examples of these chemicals are:

- **Lead from lead-based paints.**
- **Crystalline silica from bricks, cement and other masonry products.**
- **Arsenic and chromium from chemically-treated lumber.**

Your risk from these exposures varies, depending on how often you do this type of work. To reduce your exposure to these chemicals: Work in a well ventilated area, and work with approved safety equipment, such as those dust masks that are specially designed to filter out microscopic particles.

SAFETY

WARNING

For Your Own Safety Read Instruction Manual Before Operating This Equipment

The purpose of safety symbols is to attract your attention to possible hazardous conditions. This manual uses a series of symbols and signal words which are intended to convey the level of importance of the safety messages. The progression of symbols is described below. Remember that safety messages by themselves do not eliminate danger and are not a substitute for proper accident prevention measures.

DANGER

Indicates an imminently hazardous situation which, if not avoided, WILL result in death or serious injury.

WARNING

Indicates a potentially hazardous situation which, if not avoided, COULD result in death or serious injury.

CAUTION

Indicates a potentially hazardous situation which, if not avoided, MAY result in minor or moderate injury. It may also be used to alert against unsafe practices.

NOTICE

This symbol is used to alert the user to useful information about proper operation of the equipment.

WARNING

Safety Instructions for Machinery

- 1. READ THROUGH THE ENTIRE MANUAL BEFORE STARTING MACHINERY.** Machinery presents serious injury hazards to untrained users.
- 2. ALWAYS USE ANSI APPROVED SAFETY GLASSES WHEN OPERATING MACHINERY.** Everyday eyeglasses only have impact resistant lenses, they are NOT safety glasses.
- 3. ALWAYS WEAR A NIOSH APPROVED RESPIRATOR WHEN OPERATING MACHINERY THAT PRODUCES DUST.** Wood dust is a carcinogen and can cause cancer and severe respiratory illnesses.
- 4. ALWAYS USE HEARING PROTECTION WHEN OPERATING MACHINERY.** Machinery noise can cause permanent hearing damage.
- 5. WEAR PROPER APPAREL.** DO NOT wear loose clothing, gloves, neckties, rings, or jewelry which may get caught in moving parts. Wear protective hair covering to contain long hair and wear non-slip footwear.
- 6. NEVER OPERATE MACHINERY WHEN TIRED, OR UNDER THE INFLUENCE OF DRUGS OR ALCOHOL.** Be mentally alert at all times when running machinery.

WARNING

Safety Instructions For Machinery

7. Only allow trained and properly supervised personnel to operate machinery. Make sure operation instructions are safe and clearly understood.
8. **KEEP CHILDREN AND VISITORS AWAY.** Keep all children and visitors a safe distance from the work area.
9. **MAKE WORKSHOP CHILD PROOF.** Use padlocks, master switches, and remove switch keys.
10. **NEVER LEAVE WHEN MACHINE IS RUNNING.** Turn power off and allow all moving parts to come to a complete stop before leaving machine unattended.
11. **DO NOT USE IN DANGEROUS ENVIRONMENTS.** DO NOT use machinery in damp, wet locations, or where any flammable or noxious fumes may exist.
12. **KEEP WORK AREA CLEAN AND WELL LIT.** Clutter and dark shadows may cause accidents.
13. **USE A GROUNDED EXTENSION CORD RATED FOR THE MACHINE AMPERAGE.** Undersized cords overheat and lose power. Replace extension cords if they become damaged. DO NOT use extension cords for 220V machinery.
14. **ALWAYS DISCONNECT FROM POWER SOURCE BEFORE SERVICING MACHINERY.** Make sure switch is in OFF position before reconnecting.
15. **MAINTAIN MACHINERY WITH CARE.** Keep blades sharp and clean for best and safest performance. Follow instructions for lubricating and changing accessories.
16. **MAKE SURE GUARDS ARE IN PLACE AND WORK CORRECTLY BEFORE USING MACHINERY.**
17. **REMOVE ADJUSTING KEYS AND WRENCHES.** Make a habit of checking for keys and adjusting wrenches before turning machinery ON.
18. **CHECK FOR DAMAGED PARTS BEFORE USING MACHINERY.** Check for binding and alignment of parts, broken parts, part mounting, loose bolts, and any other conditions that may affect machine operation. Repair or replace damaged parts.
19. **DO NOT FORCE MACHINERY.** Work at the speed for which the machine or accessory was designed.
20. **SECURE WORKPIECE.** Use clamps or a vise to hold the workpiece when practical. A secured workpiece protects your hands and frees both hands to operate the machine.
21. **DO NOT OVERREACH.** Keep proper footing and balance at all times.
22. **MANY MACHINES WILL EJECT THE WORKPIECE TOWARD THE OPERATOR.** Know and avoid conditions that cause the workpiece to "kickback."
23. Be aware that certain woods may cause an allergic reaction in people and animals, especially when exposed to fine dust. Make sure you know what type of wood dust you will be exposed to and always wear an approved respirator.

WARNING

Additional Safety Instructions for Mini Rotary Tool

- 1. CLAMP THE WORKPIECE.** If the spinning tool slips from the workpiece while you are holding it, you could suffer piercing or abrasion injuries. DO NOT hold the workpiece with one hand and operate the tool with the other. Secure the workpiece in a vise or work-holding device before starting the rotary tool.
- 2. EXPLOSION HAZARDS.** Sparks from the grinding operation can easily ignite flammable gasses, fluids, or materials. ALWAYS make sure that these substances are completely removed from the work area before beginning operation.
- 3. ENTANGLEMENT HAZARDS.** Loose clothing or jewelry can become entangled with the spinning tool, pulling hands and fingers into the bit. To avoid this risk, remove jewelry, secure loose clothing, button long sleeves, and tie back long hair.
- 4. ELECTROCUTION HAZARDS.** DO NOT operate this tool in wet or damp conditions. Remove all liquids from the work area before beginning operation. Make sure your hands are clean and dry.
- 5. WORKPIECE CONTACT.** Jamming the spinning tool against the workpiece could cause the workpiece or tool to shatter and send debris in all directions. Firmly grasp the rotary tool and ease it into the workpiece.
- 6. TOOL CAPACITIES.** To avoid damage to the tool or workpiece that may cause operator injury, ALWAYS operate this tool within the capacities stated on **Page 4**.
- 7. ACCIDENTAL STARTUP.** To avoid unexpected startup that may cause injuries, ALWAYS make sure the rotary speed dial is turned **OFF** before connecting the tool to power.

CAUTION

No list of safety guidelines can be complete. Every shop environment is different. Always consider safety first, as it applies to your individual working conditions. Use this and other machinery with caution and respect. Failure to do so could result in serious personal injury, damage to equipment or poor work results.

INTRODUCTION

Foreword

We are proud to offer the Grizzly Model T10165 High-Precision Mini Rotary Tool. This model is part of a growing Grizzly family of fine power tools. When used according to the guidelines set forth in this manual, you can expect years of trouble-free, enjoyable operation and proof of Grizzly's commitment to customer satisfaction.

It is our pleasure to provide this manual with the Model T10165. It was written to encourage safety considerations and guide you through general operating procedures and maintenance.

The specifications, details, and photographs in this manual represent the Model T10165 as supplied when the manual was prepared. However, owing to Grizzly's policy of continuous improvement, changes may be made at any time with no obligation on the part of Grizzly.

Machine Data

Required Power..... 110V
Power Output (at no load)20W
Number of Speeds..... Variable
Speed Range..... 4,000–14,000 RPM
Max. Continuous Operating Time.....8 min.
Max. Tool Bit Diameter..... 7 mm

Contact Info

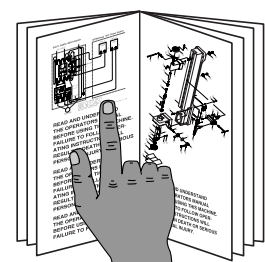
If you have any comments regarding this manual, please contact us:

Grizzly Industrial, Inc.
C/O Technical Documentation Manager
P.O. Box 2069
Bellingham, WA 98227-2069
Email: manuals@grizzly.com

Most importantly, we stand behind our tools. If you have any service questions or parts requests, please call or write us at the location listed below.

Grizzly Industrial, Inc.
1203 Lycoming Mall Circle
Muncy, PA 17756
Phone: (570) 546-9663
Fax: (800) 438-5901
E-Mail: techsupport@grizzly.com
Web Site: <http://www.grizzly.com>

⚠ WARNING



Read the manual before operation. Become familiar with this nailer, its safety instructions, and its operation before beginning any work. Serious personal injury may result if safety or operational information is not understood or followed.

SETUP

Unpacking

Your new mini rotary tool was carefully packaged for safe shipping. If you discover any damage after you have signed for delivery, *immediately call Customer Service at (570) 546-9663 for advice.*

Save the containers and all packing materials for possible inspection by the carrier or its agent. *Otherwise, filing a freight claim can be difficult.*

When you are completely satisfied with the condition of the shipment, you should inventory the contents.

Inventory

Model T10165 Inventory (Figure 1)

A.	Collet $\frac{3}{32}$ " (pre-installed).....	1
B.	Mini Rotary Tool.....	1
C.	Abrasive Cones: —Coarse Grit (Yellow)	5
	—Medium Grit (Blue)	5
D.	Threaded Mandrels (for cones).....	2
E.	Collet $\frac{1}{8}$ ".....	1
F.	Steel Bits: —Round Head 1.4mm	1
	—Cylindrical 2.1mm.....	1
G.	Diamond Bits: —Round Head 2mm	1
	—Flame 3mm	1
	—Cylindrical 1.2mm.....	1
	—Spear 2mm.....	1

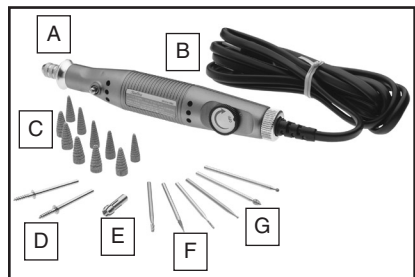


Figure 1. Model T10165 inventory.

OPERATIONS

WARNING



Operating this tool can propel objects into the air that may cause eye damage. To protect yourself from this hazard, **ALWAYS** wear ANSI approved safety glasses or goggles during operation.

Mandrels & Bits

Your mini rotary tool is supplied with two threaded mandrels that hold that hold the abrasive cones. To install an abrasive cone onto a mandrel, screw the threaded tip of the mandrel into the bottom of the cone.

Note: *The cones with yellow bottoms are coarse abrasives, and the ones with blue bottoms are a medium abrasive.*

To install a mandrel or bit:

1. DISCONNECT TOOL FROM POWER!
2. Press and hold the spindle lock to keep the spindle from rotating, then loosen the collet nut (see **Figure 2**).

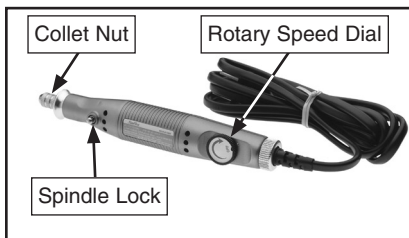


Figure 2. Model T10165 controls.

3. Fully insert the mandrel or bit shank into the collet until it stops, then retighten the collet nut.

Note: *Only tighten the collet nut until the mandrel or bit cannot be removed when you tug on it. Overtightening may damage the components.*

Operation Rules

Follow these rules to ensure a safe and efficient operation:

- Turn the rotary speed dial to **OFF** before connecting the tool to power.
- To prevent injuries from tool slippage, **ALWAYS** secure the workpiece in a vise or other clamping device. **NEVER** hold the workpiece by hand during operation.
- For efficient control of the tool, start your operation with the slowest speed, then increase the speed as needed.
- To avoid the tool slipping in your hand, make sure your hands are clean and dry.
- To prevent excessive wear of the motor components, **NEVER** operate this tool for longer than five continuous minutes. Turn it **OFF** after this time and allow it to cool for five minutes.
- To ensure a good finish, ease the cone or bit into the workpiece. Jamming it into the workpiece may damage the tool components or the workpiece.
- When using the abrasive cones, use the tip of the cone. Otherwise, the abrasive material may unravel.

ACCESSORIES

- T20501—Face Shield
- Crown Protector 4"
- T20502—Face Shield
- Crown Protector 7"
- T20503—Face Shield Window
- T20452—"Kirova" Anti-Reflective Safety Glasses
- T20451—"Kirova" Clear Safety Glasses
- H0736—Shop Fox® Safety Glasses
- H7194—Bifocal Safety Glasses 1.5
- H7195—Bifocal Safety Glasses 2.0
- H7196—Bifocal Safety Glasses 2.5

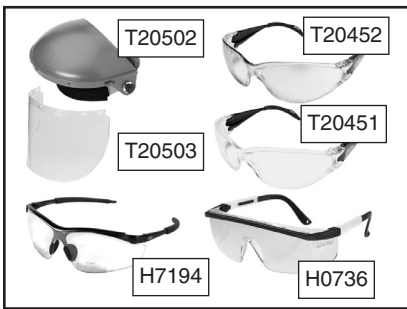


Figure 3. Eye protection assortment.

H1432—Multi-Positional Hobby Vise

This handy, go-anywhere vise features a powerful suction mechanism that securely attaches the vise to any smooth, flat surface. The swivel head can be positioned in just about any configuration and locks in place with a high torque lock ring. Ideal for hobby use around the home or take it anywhere. Steel jaws have protective rubber pads and measure 2¾" wide. Open capacity is 2½".

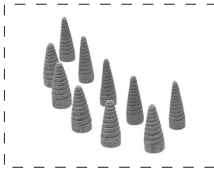


Figure 4. Model H1432 hobby vise.

Call 1-800-523-4777 To Order

REPLACEMENT PARTS

1



- Consists of:
- 5 Each Coarse Abrasive Cones
 - 5 Each Medium Abrasive Cones

2



- Consists of:
- 1 Each Round Head 1.4mm Steel Bit
 - 1 Each Cylindrical 2.1mm Steel Bit
 - 1 Each Round Head 2mm Diamond Bit
 - 1 Each Flame 3mm Diamond Bit
 - 1 Each Cylindrical 1.2mm Diamond Bit
 - 1 Each Spear 2mm Diamond Bit

3



- Consists of:
- 1 Each Collet Nut
 - 1 Each 3/2" Collet
 - 1 Each 1/8" Collet
 - 2 Each Threaded Mandrels

REF	PART #	DESCRIPTION
1	PT10165001	ABRASIVE KIT
2	PT10165002	BIT KIT

REF	PART #	DESCRIPTION
3	PT10165003	COLLET/MANDREL KIT

WARRANTY

Grizzly Industrial, Inc. warrants every product it sells for a period of **1 year** to the original purchaser from the date of purchase. This warranty does not apply to defects due directly or indirectly to misuse, abuse, negligence, accidents, repairs or alterations or lack of maintenance. This is Grizzly's sole written warranty and any and all warranties that may be implied by law, including any merchantability or fitness, for any particular purpose, are hereby limited to the duration of this written warranty. We do not warrant or represent that the merchandise complies with the provisions of any law or acts unless the manufacturer so warrants. In no event shall Grizzly's liability under this warranty exceed the purchase price paid for the product and any legal actions brought against Grizzly shall be tried in the State of Washington, County of Whatcom.

We shall in no event be liable for death, injuries to persons or property or for incidental, contingent, special, or consequential damages arising from the use of our products.

To take advantage of this warranty, contact us by mail or phone and give us all the details. We will then issue you a "Return Authorization Number," which must be clearly posted on the outside as well as the inside of the carton. We will not accept any item back without this number. Proof of purchase must accompany the merchandise.

The manufacturers reserve the right to change specifications at any time because they constantly strive to achieve better quality equipment. We make every effort to ensure that our products meet high quality and durability standards and we hope you never need to use this warranty.

Please feel free to write or call us if you have any questions about the machine or the manual.

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Thank you again for your business and continued support. We hope to serve you again soon!

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